

# How Does the Quality of U.S. Health Care Compare Internationally?

## Timely Analysis of Immediate Health Policy Issues

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### Introduction

There is a perception among many Americans that despite coverage, cost and other problems in the health care system, the quality of health care in the United States is better than it is anywhere else in the world and might be threatened by health reform. In fact, 55 percent of Americans surveyed last year said U.S. patients receive better quality of care than do those in other nations, even though only 45 percent said they thought the United States had the world's best health care system.<sup>1</sup> And while Americans overwhelmingly support government action to increase coverage and reduce the costs of health care, a recent poll found that 63 percent worry that the quality of their own care would get worse if the government ensured health care for all.<sup>2</sup> Another poll found that as many as 81 percent of Americans have such concerns.<sup>3</sup>

Participants in the current reform debate refer to the relative quality of U.S. health care as providing support for their views, and perceptions of health-care quality — what it is and where it can be found — are often at the heart of disagreements over what form of health reform the country should adopt. But hard facts to support claims are often missing, and it is clear that quality of care experts, policy makers, health care providers and the general public all have different ideas as to which

aspects of health care signify its quality and which ones are most important.

This brief brings together available evidence on how quality of care in the United States compares to that of other countries and comments on the implications of the evidence for the health reform debate. By exploring how the quality of our care compares internationally, we can address the underlying attitudes and concerns that people have about health reform. For example, if claims that the United States has the best quality of care in the world — overall or in particular respects — were well supported by the evidence, it would caution us against adopting forms of health reform that threaten those attributes of our health system responsible for this standing. But if quality of care is not remarkable — or may be even lagging — there should be less reluctance to change. In addition, a more explicit need for health reform to address quality improvement would appear warranted.

### What constitutes high-quality health care?

A number of definitions of health care quality have been put forward over the years. The U.S. Institute of Medicine's definition, which has grounded expert work in the United States and elsewhere, describes quality as "the degree to which health services for

individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."<sup>4</sup> A similar definition is used by the U.S. Agency for Healthcare Research and Quality: "Quality health care means doing the right thing at the right time in the right way for the right person and having the best results possible."<sup>5</sup> Both definitions refer to characteristics of health care that are increasingly referred to as "technical" or "clinical" quality or "effectiveness."<sup>6</sup>

In the context of efforts to assess health system performance, the term "quality" is often used to encompass a range of desirable or positive attributes of health care and the overall performance of health-care systems. A review of eight country-specific and internationally developed frameworks for evaluating health systems found a great deal of commonality in how performance has been conceptualized.<sup>7</sup> In addition to effectiveness, the researchers identified 14 other dimensions of the performance of health care systems: acceptability, accessibility, appropriateness, care environment and amenities, competence or capability, continuity, expenditure or cost, efficiency, equity, governance, patient-centeredness (-focus) or responsiveness, safety, sustainability, and timeliness.



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Many of these performance dimensions might reasonably be considered to be attributes of high-quality care (e.g., appropriateness, competence, timeliness). Those in a second group (e.g., cost, governance, sustainability) are readily observed as separate performance concerns. Reasonable people might have different views on whether others (e.g., accessibility, acceptability, responsiveness) are dimensions of quality or closely related concepts, and indeed these are treated in different ways in the frameworks reviewed. Accessibility is particularly difficult to disentangle from considerations of health care quality in that it is a prerequisite to receipt of quality health care. Availability of providers and services, coverage, benefits and affordability all come into play as potential explanations for different user experiences with the health care system and the outcomes attained. Finally, (technical) efficiency is a function of the quality and quantity of services produced at a given cost. Efficiency, or value for money, is a performance consideration of great interest to public authorities and purchasers, although only modest headway in measuring efficiency in health care has been made to date, reflecting limitations in the capacity to measure the quality of health care.

It is evident from the U.S. reform debates that popular conceptions of what constitutes good quality health care encompass a range of dimensions. Although obviously high quality implies superior health outcomes, other attributes considered indicative of quality appear to underlie popular expressions of U.S. health care

superiority, including a belief that Americans with good insurance coverage uniquely benefit from prompt availability and accessibility of cutting-edge medical procedures, medicines, and devices, as well as highly educated and well-trained health care professionals, who know and consistently do what is best for their patients. On the other hand, those who assert that we have inferior quality of care point to our relatively poor population health status,<sup>8</sup> and factors such as barriers to access for those without adequate insurance coverage or limited health plan provider networks and insufficient coordination among providers in the fragmented health care delivery system.

All of these aspects of quality and broader health system performance are important and legitimate considerations; therefore, we cast a relatively wide net in this brief. Specifically, we focus on effectiveness (or “technical” or “clinical” quality) and consider additional dimensions of quality or health system performance that are most closely related: appropriateness, safety, accessibility, acceptability, and responsiveness.

### **What is the evidence on how quality of care in the United States compares to other countries?**

To make an informed assessment about the quality of care in one health system versus another, it is important to look at a wide range of indicators. Because health care involves a complex array of activities, and because there are

many holes in our knowledge of the relative quality in many areas, it is impossible to use a single measure as a meaningful proxy. Measures that reflect multiple dimensions of quality have a certain appeal as performance indicators for policy-makers, although more specific or narrow measures have the advantage of being more actionable for administrators and clinicians. And even with a broad set of comparative measures, people may differ on which measures are most important, for example, those focusing on the level of typical or average care for common conditions versus the care available for unusual, life-threatening conditions.

The evidentiary basis for cross-country comparisons of quality could be strengthened by additional studies and improvements in methods and data. Nonetheless, a number of comparative studies on the quality of care have been published. Below we review some of the key findings from recent research that provide insight on how the quality of care in the United States compares to the quality of care in other nations. We explore quality as assessed by measures based upon population health status, measures of processes and outcomes of care for particular conditions, measures of patient safety, and indicators based on patients’ experience with health services. In each area, we put forward the evidence we could find on how the attribute in question stacks up (or fails to do so).

## How strong is the evidence base for comparing health care quality across countries?

There is modest research literature comparing the quality of care in the United States with the quality of care furnished elsewhere. Most studies of technical quality or effectiveness draw on data compiled from disease registries, medical records or administrative data. Such studies generally focus on a particular condition, such as coronary heart disease or specific forms of cancer, and they differ in the extent to which they endeavor to account for factors outside the control of the health care provider and system that could affect the results.

Efforts to identify a set of indicators for use in making international comparisons across a range of conditions as part of regular monitoring activities include an ongoing Organisation for Economic Co-operation and Development (OECD) initiative, which builds on initial work by the Commonwealth Fund and a coalition of Nordic countries. To date, the OECD has formulated, tested and validated a relatively small number of quality measures for use in international comparisons, with other measures in development.<sup>55</sup> Initial results have been published showing cross-country differences based on data obtained from national sources, but with caveats as to factors making comparisons indicative, rather than absolute. Limitations include differences in data sources used in measurement, different reporting periods, and limited ability to adjust for age and other factors (not reflecting quality of care differences) that can explain apparent cross-national differences.

Beyond this, surveys of citizens, patients and health care providers in five or more countries have been produced annually since 1998 by the Commonwealth Fund.<sup>56</sup> These provide information on how health care is perceived as well as how the experience of health care differs internationally in relation to public expectations. Surveys can explore aspects of health care and quality dimensions for which other forms of data do not exist in comparable form. Their limitations include cross-country differences in the interpretation of questions and concepts, which could affect how countries' health systems fare relative to one another, as well as standard survey research problems like recall bias.

An important issue in health care quality measurement, as in other types of research that attempt to ascertain causality, is that it is very difficult to adjust for factors outside the health care system which contribute to particular health outcomes, such as socioeconomic status, lifestyle, and disease incidence or prevalence. Similarly, quality of care measures could be affected by differential access to care across a population, reflecting coverage gaps in the United States as well as shortfalls in supply or financial barriers presented by cost-sharing requirements here and in other countries. Thus, the quality of care obtained by those with unfettered access might differ considerably from that of those who face obstacles to getting needed care.

### Are cross-country differences in life expectancy and mortality indicative of differences in health care quality?

While U.S. life expectancy is at or below the average in comparison with that of other developed countries, findings from research that has adjusted mortality to account for deaths not related to health care (so-called amenable

mortality) show the United States to be among the worst performers.

The United States is not among top performers in terms of life expectancy, an indicator influenced by factors outside the health system in addition to health care. We rank among the lower third of developed countries in life expectancy at birth. Life expectancy at age 65 may be a better indicator of U.S. health care performance because all older Americans have reasonably good insurance coverage through Medicare. U.S. life expectancy for

both men and women at age 65 is above the Organisation for Economic Co-operation and Development (OECD) average, but below what the top countries have achieved, particularly for women.<sup>9</sup>

Among 19 countries included in a recent study of amenable mortality,<sup>10</sup> the United States had the highest rate of deaths from conditions that could have been prevented or treated successfully. The extent to which differences across countries in the prevalence of particular conditions may explain the poor U.S. showing in

## What do life expectancy and mortality data tell us about the quality and effectiveness of health care?

Health status measures based on mortality and life expectancy data have been used to assess the overall effectiveness of the health system, reflecting the quality and accessibility of services, as well as environmental factors. Examples of such measures include crude mortality rates for defined populations; disability-adjusted life years (DALY), an indicator developed by the World Health Organization to assess the burden of disease; health-adjusted life expectancy (HALE), which can be used to assess whether increases in longevity are accompanied by compression of morbidity; and potential years of life lost (PYLL), a summary measures of premature mortality that assigns greater weight to deaths that are further away from a defined benchmark (such as age 70).

Although very interesting as indicators of health status, all fall short as measures of health care quality because they tend to be significantly influenced by factors other than health care. For example, of the 30 OECD countries, only Hungary does worse than the United States in female premature mortality, as measured by PYLL, and only three countries exceed the U.S. rate of male premature mortality. However, accidents, suicides and homicides play a large role in explaining this finding, as the U.S. homicide rate is more than five times the OECD average.<sup>57</sup>

More sophisticated mortality measures set aside those deaths that cannot be attributed to the effectiveness of health care. So-called amenable mortality is an indicator that aims to cast light on the relative effectiveness of health systems by calculating the rate of deaths prior to a certain age which are considered by experts to be avoidable through appropriate health care. As with other measures of mortality, amenable mortality is affected by differences in the prevalence of particular conditions across populations being compared. Thus, two health care systems could have identical rates of failing to provide adequate care for a condition that should not be fatal; however, if one of the two countries has a higher rate of prevalence of the condition among its population, its amenable mortality rate will also be higher. Nevertheless, amenable mortality does a better job than crude mortality data in assessing the effectiveness of health care delivery in improving health.

the recent study is unknown, although studies in which it was possible to adjust for such differences found that the greatest part of regional differences in mortality for certain conditions were explained by differences in disease prevalence.<sup>11</sup> A recent study comparing the United States and 10 European countries found that the United States had a much higher prevalence of nine of 10 conditions, including cancer, heart disease, and stroke, in its population over age 50.<sup>12</sup> However, it is unlikely that relative differences across countries in the prevalence of disease changed during the five years that had passed since an earlier study<sup>13</sup> by the same authors using the same methodology, in which the U.S.

health system ranked somewhat better (16 of 19) among its peers in minimizing amenable mortality. In the years between the two studies, there was an average reduction in amenable mortality for men of 17 percent across all countries included in the study, compared with only a 4 percent reduction in the rate of amenable mortality for men in the United States.

### Studies of processes and outcomes of care for particular conditions reveal differences in health-care quality

Measures specifically designed to assess technical/clinical quality of care focus on health services and health outcomes, such as five-year

survival rates for individuals with particular conditions. Such measures are less sensitive to differences across countries in disease prevalence.

Below we review available evidence on U.S. quality of care in a variety of clinical areas, in comparison with other countries. The overall evidence is mixed, indicating that the United States has neither the best nor the worst quality of health care for particular conditions among developed countries. In certain cases where U.S. quality appears low relative to that of other countries — in the areas of prevention and care for chronic conditions, for example — access barriers experienced by the uninsured and the underinsured may contribute to the results seen.



## Measuring the technical quality or effectiveness of health care: A brief primer

The science of health care quality measurement has been developed over the course of several decades. Quality measures include those to assess health care processes (what was done), outcomes (what was achieved) and structural measures that evaluate the capacity to do what needs to be done. Process measures can be further categorized as measures of overuse (when patients get services that are inappropriate for their medical condition, subjecting them to unwarranted risk and/or expense), underuse (when patients do not receive care that is indicated based on their medical condition) and misuse (when a service is provided in a technically incorrect manner), although the bulk of the measures used regularly for comparison relate to underuse of services considered medically necessary in defined circumstances.

Quality can be assessed objectively (against standards defined by evidence or professional agreement) or subjectively (against patients' expectations or experiences, or reviewer judgment, for examples). Assessment draws upon empirical data, such as administrative and medical records or patient registries and the perceptions of those involved in health care (surveys, testimonials). Quality is evaluated for populations and sub-groups within the population, as there is a particular interest in evaluating whether and how differences in health care contribute to observed disparities in health status.

## Quality of preventive care

The evidence on how the United States compares to other developed countries in terms of the quality of its preventive care is quite mixed.

In a report that summarized survey research comparing quality of care in five countries, Davis et al.<sup>14</sup> concluded that the United States had relatively high-quality preventive care. 85 percent of American women reported having had a Pap smear within the last two years and 84 percent of American women age 50 to 64 reported having received a mammogram within the last two years, the highest shares among the countries included in the survey. Perhaps reflecting differences in data sources, the OECD<sup>15</sup> found that the United States had above-

average mammography rates (61 percent U.S. versus 55 percent OECD), although was far below the best performers (82-98 percent in four countries). However, the United States had the highest cervical cancer screening rate (83 percent) among 22 countries reporting data to OECD.

Among 30 OECD countries, the United States had above-average rates of flu vaccination for senior citizens (65 percent U.S. versus 55 percent OECD average and 80 percent in top-performing Australia). However, childhood vaccination rates were below the OECD average.<sup>16</sup> The U.S. pertussis vaccination rate stood at 86 percent in 2005; only Austria and Canada reported lower rates. Even with a 92 percent childhood measles vaccination, the United

States came in below average in a field where one-third of OECD countries have rates above 95 percent.

## Quality of care for chronic conditions

Findings on the quality of U.S. care for several chronic conditions also provide a mixed picture.

Among 30 OECD countries, the United States ranked below average in adult asthma care. Adult hospital admission rates for asthma, an indicator of inadequate care for the condition, were second highest among 17 countries reporting (12 per 10,000 U.S. versus 5.8 OECD average) and U.S. asthma mortality, double the OECD average rate, was fifth highest among 25 countries reporting.<sup>17</sup>

A handful of studies undertaken in the 1990s<sup>18</sup> have compared outcomes for U.S. and Canadian patients with end-stage renal disease and found that Canadians have longer survival times while in hemodialysis or peritoneal dialysis programs, and after receipt of kidney transplant, even when extensive adjustment for comorbidity is done.

A survey of patients in six countries<sup>19</sup> found that more than half of U.S. diabetics had received four recommended services, a rate comparable to the UK and Germany, and higher than the rate seen in Australia, Canada and New Zealand. The same survey found that 85 percent of U.S. hypertension patients reported having received two recommended tests, a rate identical to Canada and exceeded only by Germany (91 percent).

## Quality of care for certain acute conditions

Studies of diverse conditions ranging from heart disease, hip fracture and vision impairment also are mixed in terms of their findings as to how U.S. quality compares to that of other countries.

- Yusuf et al.<sup>20</sup> studied patients undergoing invasive cardiac procedures in six countries and found that higher rates of invasive and revascularization procedures in United States and Brazil were associated with lower rates of refractory angina or readmission for unstable angina, no apparent reduction in cardiovascular death or myocardial infarction, but higher rates of stroke. Tu et al.<sup>21</sup> found that short-term, but not long-term, cardiac outcomes were better in the United States than Ontario.
- Ho et al.<sup>22</sup> found that inpatient hip fracture mortality was higher in Canada (Manitoba and Quebec) than in the United States (California and Massachusetts). Canadians had longer waits for surgery, although this was found not to explain the difference in mortality observed.
- Norregaard et al.<sup>23</sup> found similar postoperative visual acuity for cataract patients across four countries studied, including the United States, despite considerable differences in the organization of care and patterns of clinical practice. The United States had fewer adverse intra-operative events than the other three sites studied but, along with Manitoba, had higher rates of

early postoperative events. The United States and Manitoba used a more advanced surgical method for cataract removal as compared with Barcelona or Denmark.<sup>24</sup>

## Quality of cancer care

While interpreting the available evidence is challenging in the light of different screening protocols across countries, it does suggest that the United States as one of several world leaders in providing high-quality cancer care.

A study by Gatta and colleagues,<sup>25</sup> looked at five-year cancer survival rates for the United States and 17 European countries. The United States had the highest survival rates for cancer of the colon, rectum, lung, breast, and prostate. U.S. survival rates were also among the highest for melanoma (fourth), uterine (second) and ovarian (fifth) cancer, cervical cancer (sixth), Hodgkins disease (third) and non-Hodgkins lymphoma (fourth). The United States was ninth in survival of stomach cancer. Although average survival differences between the United States and Europe as a whole were in some cases large, the difference between the United States and the other countries with relatively high five-year survival rates were generally small (approximately 3 to 4 percent for many cancers) and (due to small sample sizes) usually not statistically significant. The study also looked at cross-country differences by population group, finding that survival rates for colon, breast and uterine cancer were similar in the United States and Europe for patients under 45 years, but were much better in the

United States for patients age 65 or older at diagnosis. In the case of stomach cancer, the U.S. survival rate for patients under age 45 was below those of many European nations, but similar among the older patients. Other studies (e.g., Coleman, et al. 2008)<sup>26</sup> have also found that U.S. survival rates for certain cancers, particularly prostate cancer, are among the best. Among 30 OECD countries, the United States had one of the best five-year survival rates for patients with breast or colorectal cancer.<sup>27</sup>

There is an important link between survival rates and screening rates for many cancers (e.g., melanoma, prostate cancer, breast cancer, colorectal cancer). Many cancers are more amenable to treatment when caught early. But it is also true that in countries with higher screening, more cancers will be diagnosed early, and survival rates in those countries will be higher simply because there are more patients in the denominator with less advanced disease. Thus, Gatta et al.<sup>28</sup> found that those countries with the highest breast cancer incidence rate (share of population newly diagnosed with the disease in a given year) also had the highest survival rates.

Differing national commitments to screening becomes an issue, particularly, in the case of prostate cancer, where U.S. incidence rates are double those of Europe because aggressive screening uncovers cancers at a very early stage. The implications for quality are complicated, in that cancer detection has instigated more treatments with serious risk of quality of life deterioration for a condition that is very slow to

develop. In 2008, the U.S. Preventive Services Task Force updated its screening advice, recommending that known risks of screening outweigh potential benefits for older men, and that informed patient preferences should serve as a determinant of appropriate care in younger men. Other countries, such as Denmark, had recommended against widespread use of the test as early as 1990 (cited in Coleman et al. 2008).<sup>29</sup>

Differences across countries in access to diagnostic and treatment services explain most of the observed differences in cancer survival rates.<sup>30</sup> Better survival rates are associated with higher national income levels, higher levels of expenditure on health, and higher investment in health technology, as proxied by indicators such as the rate of CT scanners per person. The relationship between cancer survival and level of expenditure on diagnosis and treatment has yet to be fully explored, due to data limitations, although some cross-country differences in expenditure have been documented. Using an approach to assess relative spending across nations with different income levels, OECD found that the United States spent between 41 and 62 percent of its per capita GDP on the first six months of breast cancer treatment following diagnosis for each patient, while Canada and France spent about one-third of their respective per capita GDPs for treatment during the initial phase.<sup>31</sup>

## **U.S.-Canada comparisons more often find Canadian quality is better**

A significant share of the academic research studies comparing the outcomes and effectiveness of health care across countries consists of U.S./Canada comparisons, perhaps reflecting policy interest, data availability or other factors. Although studies findings go in both directions, the bulk of the research finds higher quality of care in Canada.

A review of the evidence on quality differences between the United States and Canada found that each of the two countries performed better in different studies. Guyatt et al.<sup>32</sup> identified 38 studies comparing populations of patients in Canada and the United States. Studies addressed diverse problems, including cancer, coronary artery disease, chronic illnesses and surgical procedures. Of 10 studies that included extensive statistical adjustment and enrolled broad populations, five favored Canada, two favored the United States, and three showed equivalent or mixed results.

## **Overuse of health services not linked with service volume**

Although there have been relatively few studies comparing the rates of overuse of health services, the limited available evidence suggests that higher rates of certain surgeries and procedures in the United States put more Americans at risk, in comparison with their counterparts, even if it is the case that the share of procedures that are inappropriate

does not vary across countries with different service rates.

The degree of variation in the share of populations receiving particular services is greater than what would be expected based on population health status differences, raising a question as to whether there is underuse of the procedure in countries with relatively low rates or overuse in the countries with relatively high rates. For example, OECD countries' rates of caesarean sections per 100 live births range from 13.6 to 37.9, with U.S. rates among the highest in the OECD. Although determining the extent to which the procedure is overused requires investigation of patient characteristics, including age and comorbidities, the World Health Organization has stated that rates above 15 percent offer no benefits in terms of population health.<sup>33</sup> The United States also has the highest rates of coronary revascularization procedures, with more than double the rates of other countries with similar mortality rates from heart disease.<sup>34</sup>

However, relying on assessment of performance against evidence-based criteria, McGlynn et al.<sup>35</sup> found comparable rates of inappropriate use of coronary angiography and CABG, when comparing New York State and Canada, despite different rates of use of service in the areas studied. Findings from studies by Bernstein et al.<sup>36</sup> and Gandjour et al.<sup>37</sup> also suggest that rates of inappropriate services are not dependent on the frequency of the procedure. Despite performing relatively few cardiovascular procedures, in comparison with the United States, the rates of inappropriate surgeries



in the UK and Germany were comparable.

Higher rates of surgery may have both positive and negative impact of health outcomes. On the one hand, when performed on appropriate candidates, surgery will tend to have positive benefits in terms of life expectancy and morbidity associated with the underlying condition. On the other, greater per capita rates of heart surgery may contribute to the higher rates of mortality due to surgical and medical errors in the United States.

### **Patient safety problems appear more prevalent in the United States**

Few studies have compared patient safety at an international level, as data and indicators for use within countries are still in development. Notwithstanding such limitations, available evidence suggests that patients may be at greater risk of safety problems in the United States than they are elsewhere.

Data are available for cross-national comparisons on mortality due to surgical and medical errors.<sup>38</sup> These data show that the United States has relatively high rates, in comparison with other OECD countries, but the rates may be problematic as quality indicators due to differences in reporting accuracy across countries and the relative infrequency of this outcome.

Surveys provide another source of information on relative safety. A six-country survey of patients with a high incidence of chronic illness and recent intensive use of the health care system found that patients in the United States were

more likely than patients in other countries to report mistakes or adverse events and gaps in expert-recommended safe medication management practices.<sup>39</sup> A survey of chronically ill or intensively ill patients in eight countries<sup>40</sup> found that the United States had the highest reported rates of problems such as being given the wrong medication or dosage, experiencing a medical error, receiving incorrect test results, or facing delays in hearing about abnormal test results. Patient reports of these types of problems were lowest in the Netherlands (17 percent), France (18 percent), and Germany (19 percent) and highest in the United States (34 percent).

### **Physician and patient perceptions of health care quality suggest strengths and weaknesses of U.S. care**

As with most of the indicators described above, physician and patient reports suggest some areas of strength, but as a general matter do not distinguish American health care as providing especially high quality compared to the health care provided in other countries.

A survey of physicians in five countries<sup>41</sup> found that U.S. physicians were more likely than physicians in other countries to report that interventions in patient care geared towards cost control were threatening the quality of care they could provide to their patients. U.S. physicians were less likely to report that community resources were inadequate, but more likely to say that limitations on the medicines they could prescribe posed a problem. Compared with doctors in

Australia, Canada, New Zealand and the United Kingdom, American doctors were less likely to agree that their health care system works well and more likely to consider that the system needs complete rebuilding. A 2003 survey of hospital executives yielded a similar finding; half of American hospital executives said they were not satisfied with the performance of their country's health care system, compared with between 4 and 12 percent of hospital executives in four other countries.<sup>42</sup>

Davis<sup>43</sup> reviewed findings from multi-country surveys conducted in 2004 and 2005 that examined patients' satisfaction and experience with their health care. Patients assigned the U.S. health system mixed marks in terms of whether their health care providers communicated needed information. U.S. patients were less satisfied than patients in other countries with the quality of communication relating to doctor's office visits, but more satisfied than other patients with the quality of communication relating to hospitalization. On the other hand, U.S. patients were less satisfied than patients in other countries with how much their physicians engaged them in making health care decisions. In terms of satisfaction with the level of choice of doctor, Americans were less satisfied than patients from New Zealand and more satisfied than Canadian patients. Finally, in terms of timeliness, American and German patients reported relatively short waiting times for seeing a specialist or obtaining elective surgery. But Americans were less likely to say they could get medical attention when needed



and could readily obtain care on nights and weekends. Considering timeliness measures as a whole, German patients were more satisfied than American patients, and British and Canadian patients were least satisfied.

### **Is the average quality of care in the United States negatively affected by access barriers faced by the uninsured?**

When comparing the quality of care in the United States to that of other countries it is impossible to ignore one stark difference — the fact that close to one-fifth of the U.S. population under age 65 is uninsured. The United States is one of only three countries in the OECD, together with Mexico and Turkey, which has a sizeable share of its population lacking coverage.

It stands to reason that some of the gap between United States and other countries in average quality may well be related, in at least some part, to the insurance coverage problem in this country. Most of today's measures capture problems of "underuse," or the share of a population that receives the screening or treatment indicated, based on agreed medical practice standards. For many such measures, quality and access are intrinsically linked.

There is, in fact, some suggestive evidence of a quality-coverage relationship. In their updated study of amenable mortality, Nolte and McKee<sup>44</sup> suggest that an increase in the share of Americans uninsured between the two study periods may be responsible for the failure of the United States to improve its performance apace

with other countries studied, resulting in the United States dropping from 16<sup>th</sup> to 19<sup>th</sup> place over five years. Furthermore, the findings showing that the United States does better than Europe in cancer survival for the over-65 population suggests a possible role for insurance status as an explanatory factor, especially since working age and retirees have the same coverage in most European countries.

In addition, there is evidence to suggest that access barriers are an issue affecting U.S. performance, in particular. As compared with the residents of other countries, many more Americans — and chronically ill Americans — say they skip medicines or medical appointments due to cost.<sup>45 46</sup> Such behavior, which may reflect problems of underinsurance as well as uninsurance, may result in impaired health outcomes. By contrast, the types of access problems reported in other countries — mainly longer waits for elective surgeries — are likely to affect perceptions of service quality and reduced quality of life during the waiting period without impact on clinical outcomes.<sup>47</sup>

Based on a comprehensive review of the relevant research literature, the Institute of Medicine<sup>48</sup> concluded that the uninsured have worse health and higher mortality than the insured population in the United States. Population based studies have shown that uninsured Americans have shorter survival times for conditions such as cancer of the breast, colorectum and prostate than those with insurance.<sup>49</sup> A review of the research literature over the past 25 years by Hadley<sup>50</sup> found that the

uninsured receive fewer preventive and diagnostic services, tend to be more severely ill when diagnosed, and receive less therapeutic care. He concluded that insurance coverage could reduce mortality by an estimated 4 to 25 percent, depending on the condition.

But all of this does not necessarily mean that the uninsured have worse quality of care, as measured by provision of evidence-based, recommended processes of care that are likely to improve patient outcomes. In fact, a study by Asch et al.<sup>51</sup> found that health insurance status was largely unrelated to the quality of care as measured by adherence to professionally recommended standards of care, among those with at least one contact with the health care system within a two-year period. This somewhat surprising finding suggests that the access barriers experienced by the uninsured may not result in differential treatment once an uninsured person succeeds in engaging with the health care delivery system.

### **Summary and conclusions**

Taken collectively, the findings from international studies of health care quality do not in and of themselves provide a definitive answer to the question of how the United States compares in terms of the quality of its health care. While the evidence base is incomplete and suffers from other limitations, it does not provide support for the oft-repeated claim that the "U.S. health care is the best in the world." In fact, there is no hard evidence that identifies particular areas in which U.S. health care quality is truly exceptional.

Instead, the picture that emerges from the information available on technical quality and related aspects of health system performance is a mixed bag, with the United States doing relatively well in some areas — such as cancer care — and less well in others — such as mortality from conditions amenable to prevention and treatment. Many Americans would be surprised by the findings from studies showing that U.S. health care is not clearly superior to that received by Canadians, and that in some respects Canadian care has been shown to be of higher quality.

To be sure, there are limitations to the current evidence base. In particular, there is no data or evidence by which to answer the question of whether the United States is a place where one finds health care that exceeds the quality of the best care available elsewhere in the world — in other words, whether the “best U.S. health care is the best in the world.” Although it is often held that the U.S. strength lies in state-of-the-art, technically oriented care, especially focused on “rescue” care, rather than care for more routine acute and chronic conditions, studies typically do not compare the “best” care offered in different countries. Further, there remain other aspects of health care for which we have no quality measures or inadequate data for comparisons.

Existing studies also fail to tell us much at all about the reasons for the apparent differences in quality observed across countries, although numerous hypotheses have been put forward (e.g., differences in the use of health

information technology, differences in the coordination of care and the fragmentation of health care delivery, variations in reliance of incentives for providers and consumers to provide and select care based on consideration of quality). We do know, however, from a five-country survey of primary care physicians<sup>52</sup> that U.S. physicians’ practices are more limited in information capacity, provide less patient access outside of traditional work hours, and are among the least likely to work in teams or to receive financial rewards for quality, all factors that could bear on the quality of primary care furnished.

Taken together, these studies do provide a strong basis for determining whether proposed health reform initiatives might threaten or, alternatively, strengthen the current level of U.S. quality. While evidence is not conclusive, it is clear that the argument that reform of the U.S. health system stands to endanger “the best health care quality in the world” lacks foundation. Like other countries, the United States has been found to have both strengths and weaknesses in terms of the quality of care available, and the quality of care the population receives. The main ways in which the United States differs from other developed countries are in the very high costs of its health care and the share of its population that is uninsured.

In the light of the fact that the United States spends twice as much per person on health care as its peers, those who question the value for money obtained in U.S. health expenditures are on a firm footing. The evidence suggests that

other developed countries achieve comparable quality of care while devoting at most two-thirds the share of their national income.

Faced with the evidence, one might well ask why it is that assertions of the superiority of U.S. health care are so common. Technical definitions and popular conceptions of quality include many different dimensions and there may not be agreement about which dimensions are most important. For example, people who make the claims that the United States has the “best quality of care” in the world may be prioritizing a degree of access to medical technology and innovation which they believe to be unique to the United States. Perhaps media attention paid to outcomes for a select few (e.g., multiple organ transplant recipients, high-risk delivery of multiple births) has cast into shadow the average outcomes of the majority of Americans with more routine, yet serious, conditions and other health care needs.

But a less-than-fully informed public comes at a cost in that assertions of excellence divert attention from the need to inspire and foster systematic quality improvement activities. Furthermore, there seems to be a routine genuflection to the widespread belief of U.S. quality excellence, even among experts. In an environment where even insured Americans receive only about half of the services that experts consider necessary, there is a strong argument for placing quality firmly on the health reform agenda.<sup>53</sup> In short, health reform can be seen as an opportunity to systematically improve quality of

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care, rather than as a threat to existing levels of quality.

Health reform provides an opportunity to build on strengths and correct weaknesses, work towards aims for improvement, such as those defined by IOM in *Crossing the Quality Chasm*,<sup>54</sup> that care be safe, effective, patient-centered, timely, efficient and equitable. The IOM continues to push for quality improvement based on the evident gap between what is done and what should be done, what can be achieved and what is achieved, but international comparisons have not played a major role in pushing forward that message. On the contrary, unsubstantiated claims that, despite any shortfalls, the United States

has the “best” quality of care in the world are sometimes put forward to support views that reforms are unwarranted on quality grounds and even risky — particularly those reforms that would modify U.S. health financing, coverage or delivery arrangements in ways similar to those used in other countries.

On the basis of this review it is safe to say that U.S. health care is not pre-eminent on quality; furthermore, one can surely argue that U.S. health care quality is not at risk from the kinds of health reform proposals receiving attention. On the contrary, our findings strengthen arguments that reform is needed to improve the relative performance of the U.S.

health system on quality. If reform accomplishes no more than extending insurance coverage to the more than 45 million Americans without insurance, it will be an important step forward, but more is needed to ensure health care quality improvement. To the extent it is possible to improve health care delivery through reforms that strengthen incentives to apply knowledge and meet quality standards, employ technology to reduce errors and ensure appropriate care, and help consumers and patients demand better quality, even more might be achieved.

## Notes

- <sup>1</sup> Reuters (2008), "Republicans and Democrats Diverge on Health Care Issues," March 20.
- <sup>2</sup> Sack, K and M Connelly (2009), "In Poll, Wide Support for Government-Run Health," *New York Times*, June 21.
- <sup>3</sup> Connolly, C and J Cohen (2009), "Most Americans Want Health Reform But Fear Its Side Effects," *Washington Post*, June 24.
- <sup>4</sup> Institute of Medicine (1990), *Medicare: A Strategy for Quality Assurance*, Volume II. Washington, DC: National Academy Press.
- <sup>5</sup> Agency for Healthcare Research and Quality, "Your guide to choosing quality healthcare." Rockville: Agency for Healthcare Research and Quality; 1998. Available at: <http://www.ahrp.gov/consumer/qnt/>. Accessed May 20, 2009.
- <sup>6</sup> Arah, OA, NS Klazinga, DMJ Delnoij, AHA Ten Asbroek and T Clusters (2003), "Conceptual Frameworks for Health Systems Performance: A Quest for Effectiveness, Quality and Improvement," *International Journal for Quality in Health Care*; Vol. 15, No. 5, pp. 377-398.
- <sup>7</sup> Arah OA, Westert GP, Hurst J, Klazinga NS. (2006), "A conceptual framework for the OECD Health Care Quality Indicators Project," *International Journal of Quality in Health Care*. Sep;18 Suppl 1:5-13.
- <sup>8</sup> Carey, D, B Herring and P Lenain (2009), "Health Care Reform in the United States," OECD Economics Department Working Paper No. 665, Organization for Economic Cooperation and Development: Paris.
- <sup>9</sup> OECD, "Quality of Care."
- <sup>10</sup> Nolte and McKee (2008), "Measuring the Health of Nations: Updating an Earlier Analysis," *Health Affairs*, 27, no. 1: 58-71.
- <sup>11</sup> Nolte and McKee (2004), *Does Health Care Save Lives? Avoidable Mortality Revisited*, The Nuffield Trust.
- <sup>12</sup> Thorpe, KE, DH Howard, and K Galactionova (2007), "Differences in Disease Prevalence as a Source of the U.S.-European Health Care Spending Gap," *Health Affairs* Web Exclusive, 2 October.
- <sup>13</sup> Nolte and McKee (2003), "Measuring the Health of Nations: Analysis of Mortality Amenable to Health Care," *BMJ* 327: 15 November.
- <sup>14</sup> Davis, K, C Schoen, S C Schoenbaum, AJ Audet, MM Doty, AL Holmgren, and JL Kriss, "Mirror, Mirror on the Wall: An Update on the Quality of American Health Care through the Patient's Lens," *The Commonwealth Fund*, April 2006.
- <sup>15</sup> OECD, "Quality of Care."
- <sup>16</sup> OECD, "Quality of Care."
- <sup>17</sup> OECD, "Quality of Care."
- <sup>18</sup> Guyatt GH, PJ Devereaux, J Lexchin, SB Stone, MA Yalnizyan, D Himmelstein, et al. A systematic review of studies comparing health outcomes in Canada and the United States. *Open Med* 2007;1(1):e27-36.
- <sup>19</sup> Schoen, C, R Osborn, PT Huynh, et al., "Taking the Pulse of Health Care Systems: Experiences of Patients with Health Problems in Six Countries," *Health Affairs* Web Exclusive, November 3, 2005, W5-509-W5-525.
- <sup>20</sup> Yusuf, S, M Flather, J Pogue, D Hunt, J Varigos et al. (1998), "Variations between Countries in Invasive Cardiac Procedures and Outcomes in Patients with Suspected Unstable Angina or Myocardial Infarction without Initial ST Elevation," *The Lancet*, Vol. 352, August 15.
- <sup>21</sup> Tu, J, C Pashos, C Naylor, E Chen et al. (1997), "Use of Cardiac Procedures and Outcomes in Elderly Patients with Myocardial Infarction in the United States and Canada," *The New England Journal of Medicine*, 336:21, May 22.
- <sup>22</sup> Ho, V, B Hamilton and L Roos (2000), "Multiple Approaches to Assessing the Effects of Delays for Hip Fracture Patients in the United States and Canada," *Health Services Research*, 34:7 March.
- <sup>23</sup> Norregaard, J, C Hindsberger, J Alonso, L Bellan, P Bernth-Petersen, et al. (1998), "Visual Outcomes of Cataract Surgery in the United States, Canada, Denmark and Spain," *Archives of Ophthalmology*, Vol. 116, August.
- <sup>24</sup> Norregaard, J, P Bernth-Petersen, L Bellan, J Alonso, et al., (1999), "Intraoperative Clinical Practice and Risk of Early Complications after Cataract Extraction in the United States, Canada, Denmark and Spain," *Ophthalmology* 106:42-48.
- <sup>25</sup> Gatta, G, R Capocaccia, MP Coleman, LA Gloeckler Ries, T Hakulinen, A Micheli, M Sant, A Verdecchia and F Berrino (2000), "Towards a Comparison of Survival in American and European Cancer Patients," *Cancer*, Vol. 89, No. 4, pp. 893-900.
- <sup>26</sup> Coleman, Michael P., Manuela Quaresma, Franco Berrino, Jean-Michel Lutz, Roberta De Angelis, Riccardo Capocaccia, Paolo Baili, Bernard Rachet, Gemma Gatta, Timo Hakulinen, Andrea Micheli, Milena Sant, Hannah K Weir, J Mark Elwood, Hideaki Tsukuma, Sergio Koifman, Gulnar Azevedo e Silva, Silvia Francisci, Mariano Santaquilani, Arduino Verdecchia, Hans H Storm, John L Young, and the CONCORD Working Group (2008), "Cancer survival in five continents: a worldwide population-based study (CONCORD)," *The Lancet*, Vol. 9, August.
- <sup>27</sup> OECD, "Quality of Care."
- <sup>28</sup> Gatta G, "Towards a Comparison of Survival in American and European Cancer Patients."
- <sup>29</sup> Coleman, M "Cancer survival in Five Continents."
- <sup>30</sup> Coleman, M "Cancer survival in Five Continents."
- <sup>31</sup> OECD (2003), "Summary of Results from Breast Cancer Disease Study," chapter 4 in *A Disease-based Comparison of Health Systems: What is Best at What Cost*, (Organization for Economic Cooperation and Development, Paris.
- <sup>32</sup> Guyatt GH *Open Med*.
- <sup>33</sup> Althabe F, Belizán JF. Caesarean Section: The Paradox. *The Lancet* 2006;3 68:1472-3.
- <sup>34</sup> OECD, "Quality of Care."
- <sup>35</sup> McGlynn, E, D Naylor, et al. (2004), "Comparison of the Appropriateness of Coronary Angiography and Coronary Artery Bypass Graft Surgery Between Canada and New York State," *JAMA* Vol. 272, No. 12, September 28.
- <sup>36</sup> Bernstein SJ, J Kosecoff, D Gray, JR Hampton, RH Brook, (1993), "The Appropriateness of the Use of Cardiovascular Procedures: British versus U.S. Perspectives," *International Journal of Technology Assessment in Health Care*. Winter; 9(1):3-10.
- <sup>37</sup> Gandjour, A, I Neumann, and K Wilhelm-Lauterbach (2003), "Appropriateness of Invasive Cardiovascular Interventions in German Hospitals (2000-2001): an evaluation using the RAND appropriateness criteria," *European Journal of Cardio-Thoracic Surgery*, Volume 24, Issue 4, October.
- <sup>38</sup> OECD (2008), *OECD Health Data*, Organization for Economic Cooperation and Development, Paris.
- <sup>39</sup> Schoen, et al., "Taking the Pulse of Health Care Systems."



<sup>40</sup> Schoen C, R Osborn, SK How, M Doty, and J Peugh. (2008), “In Chronic Condition: Experiences Of Patients With Complex Health Care Needs, In Eight Countries, 2008,” *Health Affairs*, 28, no. 1 (2009): w1-w16 (Published online 13 November 2008).

<sup>41</sup> Blendon R, C Schoen, K Donelan, R Osborn, C DesRoches, K Scoles, K Davis, K Binns, and K Zapert, “Physicians’ Views on Quality of Care: A Five-Country Comparison,” Based on Commonwealth Fund 2000 International Health Policy Survey of Physicians, The Commonwealth Fund, *Health Affairs*, May/June 2001.

<sup>42</sup> Blendon R, C Schoen, C DesRoches et al., “Confronting Competing Demands to Improve Quality: A Five-Country Hospital Survey,” *Health Affairs*, May/June 2004 23(3):119- 35.

<sup>43</sup> Davis K “Mirror, Mirror on the Wall.”

<sup>44</sup> Nolte and McKee, “Measuring the Health of Nations.”

<sup>45</sup> Schoen, C and M Doty, “Inequities in Access to Medical Care in Five Countries: Findings from the 2001 Commonwealth Fund International Health Policy Survey,” *Health Policy*, March 2004 67(3):309-22.

<sup>46</sup> Schoen C, “In Chronic Condition.”

<sup>47</sup> Hurst, J and L Siciliani (2003), “Tackling Excessive Waiting Times for Elective Surgery: A Comparison of Policies in Twelve OECD Countries,” OECD Health Working Paper, No.6 (OECD: Paris.

<sup>48</sup> Institute of Medicine (2009), America’s Uninsured Crisis: Consequences for Health and Health Care. Washington, DC: National Academy Press.

<sup>49</sup> McDavid, K, T Tucker, A Sloggett and MP Coleman (2003), “Cancer Survival in Kentucky and Health Insurance Coverage,” *Archives of Internal Medicine* 163:2135-2144.

<sup>50</sup> Hadley J, (2003), “Sicker and Poorer—The Consequences of Being Uninsured: A Review of the Research on the Relationship between Health Insurance, Medical Care Use, Health, Work, and Income,” in *Medical Care Research and Review* 60 3S.

<sup>51</sup> Asch, S, E Kerr, J Keesey, JL Adams, CM Setodji, S Malik and E McGlynn (2006), “Who is at Greatest Risk for Receiving Poor-Quality Health Care?” *NEJM* 354:11, pp. 1147-1156, March 16.

<sup>52</sup> Schoen, C, R Osborn, PT Huynh, et al., “On the Front Lines of Care: Primary Care Doctors’ Office Systems, Experiences, and Views in Seven Countries,” *Health Affairs* Web Exclusive, November 2, 2006, w555–w571.

<sup>53</sup> McGlynn, E (2008), “The Case for Keeping Quality on the Health Reform Agenda,” testimony before the U.S. Senate Committee on Finance, June 3.

<sup>54</sup> Institute of Medicine (2001), Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC: National Academy Press.

<sup>55</sup> OECD (2009), Health Care Quality Indicators Project, <http://www.oecd.org/health/hcqi>, accessed June 14, 2009.

<sup>56</sup> The Commonwealth Fund, Surveys: International Health Policy, <http://www.commonwealthfund.org/Surveys/View-All.aspx?topic=International+Health+Policy>, accessed May 15, 2009.

<sup>57</sup> OECD, “Quality of Care.”

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